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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/791,386

03/03/2004

Minoru Sakai

FS-F03230-01

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37398

7590

12/29/2006

TAIYO CORPORATION

401 HOLLAND LANE

#407

ALEXANDRIA, VA 22314

EXAMINER

CHEA, THORL

ART UNIT

PAPER NUMBER

1752

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

12/29/2006

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/791,386

Applicant(s)

SAKAI ET AL.

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 March 2004.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-35 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20040707.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

2. Claims 1-35 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. The claimed invention is related to "an image forming method", but there is no actual processing steps provided therein. The process is inoperative and lacks utility.

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-35 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: the step of imagewise exposure of the photothermographic material with a laser beam and the step of heating the imagewise exposed the photothermographic material are necessary in the formation of an image using the photothermographic material. There are no such steps presented in the invention claimed in claims 1, 15 and 30.

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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6. Claims 30-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification fails to teach as how to form an image from a photothermograohic material in the absence of first imagewise exposing a photothermographic material before thermally developing the material to produce an image.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 15-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Toya et al (US Patent No. 6,335,153), Harai et al (US 6,475,715B2), and Hirabayashi et al (US Patent 6,468,720)

Toya et al discloses an image forming apparatus including exposed portion (16) equipped with a laser beam scanner and heat development portion (18) with conveying roller pairs of the conveying section 17 for developing a photothermographic material. See Fig 1; page 22, lines 25-60, and the polyhalogenate compound in column 29, lines 14-65. Harai et al disclose a photothermograohic material used in the process of the claimed invention. See the composition of the material which contains the polyhalogenate compound of the present invention in column

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37-40, claims 1-17. Hirabayashi et al discloses heating the exposed photothermographic material at the transport speed of between 22 mm/ sec to 40 mm/sec to develop the exposed photothermographic material. See Fig. 1 and Fig.2 and abstract.

Toya et al do not disclose the line speed of the thermal development of 20 mm/sec or higher, but Harabayashi et al discloses the line speed of thermal development claimed in the present invention. Therefore, it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to adjust the conveying roller speed in the apparatus taught in Toya et al with a known developing speed taught in Hirabayashi et al with an expectation of producing superior image, and thereby provide a process as claimed. The polyhalogenate compound have been commonly used as antifoggant for photothermographic material such as being used in Toya et al and Harai et al.

9. Claims 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Toya et al (US Patent No. 6,335,153) and Harai et al (US 6,475,715B2).

Toya et al discloses an image forming apparatus including exposed portion (16) equipped with a laser beam scanner and heat development portion (18) with conveying roller pairs of the conveying section 17 for developing a photothermographic material. The photothermographic material is developing at temperature from 100°C to 140°C, and the development time from 1 to 180 seconds. See Fig 1; page 22, lines 25-60; page 19, lines 65-60; and the polyhalogenate compound in column 29, lines 14-65. Harai et al disclose a photothermographic material used in the process of the claimed invention. See the composition of the material which contains the polyhalogenate compound of the present invention in column 37-40, claims 1-17. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to

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thermally develop of the material taught in Toya et al with an interval of time of 1 to 180 seconds relatively to the temperature disclosed therein with an expectation of forming an image. The interval of time of 12 second or less is within the range taught in Toya et al. The polyhalogenate compound have been commonly used as antifoggant for photothermographic material such as being used in Toya et al and Harai et al.

10. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oyamada et al (US 2004/0038156A1) or Yamane et al (US 2004/0058281) in combination with Harai et al (US 6,475,715B2). Oyamada discloses a method for processing a photothermographic material using an apparatus having imagewise exposure portion annexed to heat developing portion. The photothermographic material is exposed and thermally developed during transportation at transportation speed of 23 mm/sec, and the time period for development is particularly preferably from 3 seconds to 12 seconds. See abstract; Fig.1; page 43, [0416] to [0417]; and polyhalogenate compound on page 24, [0177]. Yamane discloses similar teaching. See Fig.1-3 and the description thereof on page 49, especially second column, [04770], [0419] and page 50, first column. Harai et al disclose a photothermographic material used in the process of the claimed invention. See the composition of the material which contains the polyhalogenate compound of the present invention in column 37-40, claims 1-17. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the known polyhalogenate compound in Harai et al in the material of Oyamada et al or Yamane et al in combination with the use of the apparatus disclosed therein, and thereby provide a process as claimed.

***Double Patenting***

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11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 10/448,280 in view of Harai et al (US 6,475,715B2). This is a provisional obviousness-type double patenting rejection. The polyhalogenate compound used in the present invention has been known in Harai et al, and it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the polyhalogen compound in Harai in the material used in the process of the copending application to improve the image stability of the photothermographic material, and thereby provide a process as claimed.

13. Claims 1-29 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 7,105,282B2 in view of Harai et al (US 6,475,715B2). The polyhalogenate compound used in the present invention has been known in Harai et al, and it would have been obvious to the worker of ordinary skill in the

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art at the time the invention was made to use the polyhalogen compound in Harai in the material used in the process claimed in the U.S. Patent No. 7,105,282 B2 to improve the image stability of the photothermograohic material, and thereby provide a process as claimed.

***Conclusion***

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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December 21, 2006



Thorl Chea

Primary Examiner

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